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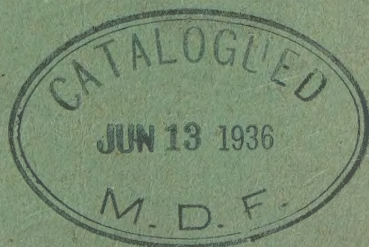
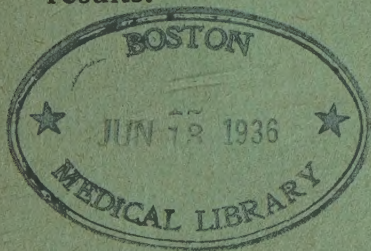
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HOW MUCH CAN OHIO AFFORD TO SPEND FOR HEALTH?

Articles in this issue discuss the Hughes Act district health organization from the standpoints of expense and practical results.



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OHIO'S HEALTH

OHIO has for many years suffered a system of local health administration of the Model of 1893. A quarter of a century of progress has seen the most important single feature of the community's duty to its citizens remain without a single forward step. Physicians, social workers and public-spirited people all over the State have lamented the situation, but without avail.

The first task of the reorganized State Department of Health, when it came into being in 1917, was to attempt to combat a statewide epidemic of smallpox with a system of local health officers absolutely incapable of controlling the situation.

Then came the influenza epidemic of 1918. The State was swept by a pestilence which disabled about one in four in the population and killed about one in 250. Business was suspended; schools, churches, factories and mines were closed, at a time when the nation was straining every nerve to bring the war to a speedy and successful conclusion. The local health machinery, except in a few of the larger cities, collapsed, and what was done was done by hastily collected volunteer organizations, assembled on the spur of the moment to meet a danger to health of unprecedented magnitude.

While the influenza epidemic was just passing its crest, the General Assembly met, and in response to a general demand the State Department of Health prepared a bill providing for an adequate local system of health administration. This bill was passed 81 to 14 in the House and unanimously in the Senate. It was signed by the Governor on May 9 and became effective August 10. The State Department of Health at once began the difficult task of organizing the machinery to put the law into operation by January 1, 1920, in order that, should the "flu" return, we might have at least the skeleton of an organization with which to combat it.

The new health law, called after its patron the Hughes Health Law, recognized and incorporated into its provisions all that the world has learned about preventing disease in the past generation. It swept away the old part-time local organization with its 2,141 boards of health and health officers, and proposed in its stead a system of something over one hundred districts, every one of which would be in charge of a man whose whole time would be given to the business of protecting the public health and who would be chosen solely because of his fitness for the job he was to fill.

The cost of the new system was estimated at the time of its passage as about one million dollars in addition to the present cost. This is about twenty cents per capita for the present population.

The cost of the new system was to be borne in exactly the same way as was that of the old system, by the townships, villages and cities. It was recognized that the possible late passage of the bill might make it difficult to finance the proposal during the year 1920, as some local taxing districts were already in serious financial difficulties, due to the rising cost of living and the lack of corresponding increase in revenues. It was generally expected that the General Assembly would afford substantial relief to these districts at the present session. In view of the urgent necessity of having the new system ready to combat a possible return of influenza, and in further view of the savings in quarantine and similar expenses that would follow the operation of the law, the Department felt that its operation could not be postponed, and that with the co-operation of auditors and other interested persons, the system might be financed on at least a minimum basis during 1920 without serious hardships.

The new system was designed to give the local communities making up the districts absolute control of the amount and cost of the service they should elect to have in excess of the minimum required by the law. The State contributed a large part of the cost of the minimum organization. The budget of the district board of health is required by the law to be submitted to a council made up of the mayors of the municipalities and the chairmen of the trustees of the townships making up the district. This council has full power to reduce any item in the budget or the total of all items but may not increase any item or the total of all items. The auditor, sitting with this council, gives all necessary information regarding the fiscal situation of the taxing districts, and the county prosecutor is at hand to give legal advice. This review was intended to give the elected representatives of the district full control over all expenditures in connection with this law. It is difficult to see how a more complete control could have been given to the local communities.

The preliminary work of organization was carried on satisfactorily by the division supervisors of the State Department of Health, the various advisory councils met and elected boards of health of the highest possible caliber, and it appeared that the organization of the districts would proceed without serious difficulty. The only difficulty which has so far developed in setting up the organization is that of finance for the year 1920.

Although the bill passed sufficiently early for levies to be made for health purposes large enough to provide for the cost of the new organiza-

tion, in only one county, Pickaway, so far as is known to the Department of Health, did the auditor bring the need for an additional levy for health purposes to the attention of the budget makers, and provide a fund for the operation of the law.

Notice was sent to all township and municipal officials as early as July 10, calling their attention to the necessity for making provision for the operation of the law in their budgets, and every effort was made to have them give the matter their attention. Most of the townships and villages failed, however, to make any provision for the new law. Some townships and villages even omitted to provide the amounts they had set aside in previous years for health purposes.

When the budgets of boards of health were presented to the district advisory councils, only about one in three exercised its right under the law to reduce budgets, although about five counties refused to pass any budget whatever.

The result of this attitude on the part of auditors and of the officials of the taxing districts has been to produce, in some districts, a situation such that the amounts required to finance the budgets approved by the advisory council will equal or exceed the general funds of the taxing districts. This general fund is supposed to cover not only health, but poor relief and certain other minor expenses of the taxing district.

This situation has been made public and the charge made that the provisions of the law are such as to permit extravagance and waste. Some persons have been led to believe that the law should be repealed on these grounds.

As a matter of fact the budgets already approved amount to a little more than one million dollars. The additional budgets to be ap-

proved will, in all probability, not bring the total above \$1,500,000. This \$1,500,000 is to provide health protection for considerably more than three million persons. It represents an increase of perhaps \$1,200,000 over the cost for 1918, which all admit provided an inadequate and almost useless system.

One and one-half million dollars represents an addition to the average tax rate of the State of fifteen one-hundredths of a mill. The highest tax rate for any health district will be a little more than one-half mill.

From the \$1,200,000 of new money required by the new boards of health must be subtracted \$200,000 which constitutes the State's portion of the cost, leaving at the outside \$1,000,000 of new money to be paid by the taxing districts.

This \$1,000,000 represents the cost, not only of running the system during 1920, but of all equipment required to set the system in operation. It represents also the cost, not of a system shaken down and in permanent running order, but of a system in process of organization, with component organizations which are unfamiliar with their duties and rights under the law.

There is every reason to believe that this sum will be considerably reduced before the apportionments are actually made. District advisory councils now meeting are scrutinizing the budgets of boards of health much more carefully than did the councils which met early, and the Department is taking up with councils where very large allowances were made the question of revising these budgets to make them conform to existing revenues.

Even were these reductions not made, however, no one can seri-

ously contend that the citizens of Ohio are unable to support a system of health protection costing \$1,500,000 per annum.

The 5,300,000 people of Ohio represent the richest unit of population on the earth. They own and operate 500,000 automobiles. They voted for themselves, on November 4, nearly \$7,000,000 of taxes for maintenance of roads. Every bond issue having as its purpose health protection of which the Department has knowledge passed by a large majority. The people of Summit County, whose alleged extravagance in providing \$50,000 for health protection is commented on, voted a tuberculosis sanatorium issue of \$300,000, four to one.

Ohio needs a health system of 1920 model. Ohio can afford the best there is. The Hughes Health Law has been praised by health authorities in every part of the country as the best ever drawn.

It costs money. Any health system that can be drawn costs money. No effective service of any kind can be rendered 5,000,000 people for any small sum.

If there are loose places in the Hughes Law, they should be tightened up. The Department of Health will co-operate in any constructive effort to improve the bill. It is not perfect. Few human things are perfect.

But the Hughes Law is as good a piece of health machinery as can be devised under our present constitution. It is as free from the danger of political control as any law can be made. It is an honest effort to improve public service. The State Department of Health makes no apologies for it, or for its part in the preparation and passage of the law.

There is only one question before the house: Does Ohio want

to prevent disease, does she want health protection, does she want to build up her boys and girls into strong and vigorous manhood and womanhood? Will she spare pennies in a matter that affects life and death, that affects every home and fireside, loved ones and kindred?

The State Department of Health believes that the people want health protection, that they are willing to pay a fair price, to give the new system a fair show, and then after a fair trial to judge of its worth and permanence.

LOCATION OF TUBERCULOSIS SANATORIA

An interesting though indirect commentary on the recent decision by the Michigan Supreme Court whereby the Lansing board of health was restrained from locating an isolation hospital ("pest house" the court called it) in a thickly settled residential district, is afforded by the results of a tuberculosis survey of the residents of Saranac Lake, N. Y., under the auspices of the Edward L. Trudeau Foundation. It bears out what progressive health officers and sanitarians have repeatedly urged, that there is a minimum of danger of infection of healthy adult residents of resorts frequented by tuberculosis patients. The Saranac survey showed that indigenous morbidity and mortality from tuberculosis are low, only 0.3 of 1 per cent of the living cases being found among the native born and 0.9 of 1 per cent among previously healthy residents. This result is in accord with investigations elsewhere and should be remembered in overcoming the unreasonable prejudices regarding the alleged dangers from proximity to tuberculosis sanatoria. — *Public Health Reports*.

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EDITORIALS

Hughes Act Is Acclaimed as Notable Health Measure

The Hughes Act "is perhaps the most notable step yet taken in America for the creation of administrative machinery for the protection of the public health." This is the comment of Dr. C.-E. A. Winslow of Yale, whose name stands for progressive thought in public health wherever it is mentioned. His opinion is voiced in a discussion of recent advances in public health administration in *Modern Medicine* for September.

Dr. Winslow considers particularly the advances in Ohio and New York. The new New York law authorizes unions between local political units for purposes of local health administration, and opens the way for highly increased efficiency of health service wherever local communities desire such an improvement. The Ohio law, however, goes further and makes improvement of local health administration obligatory, instead of merely permissive. This fact leads Dr. Winslow to make the comment quoted.

"Adequate powers, adequate appropriations and the trained men to use them are the three essentials of successful health organization," continues Dr. Winslow's discussion. "Authority and funds will now be available throughout the State of Ohio, and in New York wherever local sentiment awakens to the opportunity offered by the public health law. The only question now is—how soon can the trained men and women be found, competent to direct the machinery created by this far-sighted legislation?"

Ohioans may rest assured that the State health authorities have done and will continue to do all in their power to interest trained men and women in the opportunities offered by the newly-opening field of public health work in the State. The situation in Ohio is attracting the attention of the best public health workers of the country, and it is certain that, while perfection will not be attained at once, the beginning of 1920 will see a large number of thoroughly competent health officials ready for work in Ohio. Future years will just as certainly bring further improvement. Unless the people of the State materially change their present attitude toward the place of public health protection in the governmental program, Ohio will continue to lead, as she is just now beginning to lead, in progressive sanitary administration.

It should be a source of gratification and pride to every Buckeye to see his State acclaimed as the first really to recognize that human lives are the greatest of all natural resources and to follow that recognition with a practical program of conservation.

* * *

Some Concrete Things the Hughes Act Will Do

The discussion, elsewhere in this magazine, of public health improvement possible and probable in Ohio under the new local health administrative system gets down to concrete and practical details. For that reason it means more to the average reader than would a discussion of theoretical principles of public health organization.

It is evident to the man in the street, without further argument than is presented by the facts themselves, that the Hughes Act creates a system which, from a purely organizational standpoint, is far superior to our old disorganized state of affairs.

The doubt which may reasonably rise in his mind, however, is whether Ohio actually needs such a thorough organization for health protection.

"Sound in theory, is the new organization necessary in practice or is it merely the creation of some faddist?" he may ask.

We know the answer, of course: "The new local health administrative system is the creation of practical men who saw a practical problem and sought to meet it in a practical way."

But we must prove that statement, and the facts and probabilities outlined in the article mentioned serve as the foundation for our argument. One who considers with an open mind the past and the future, as presented in this discussion, must be convinced that Ohio has suffered woefully in years gone by because of her lack of public health protection, and that the new organization will justify itself in results which anybody can measure — prevention of unnecessary sickness and premature deaths.

The public-spirited citizen who wishes to smooth the way for Ohio's new health organization can accomplish that result by helping to get this hopeful message before the people of the State.

* * *

Stamp Out Scarlet Fever and Diphtheria

Diphtheria and scarlet fever at this season demand the careful attention of all who are charged with the protection of the health of Ohio's children. Both diseases are exhibiting higher prevalence than for several years past, and further increases will follow as their curves take their usual winter rise.

Carelessness causes many deaths from these diseases. Parents too often fail to take seriously the slight early symptoms and to supply in the early stages of their children's sickness the medical attention which is of so much more value then than later. Especially in the case of diphtheria is this true: early administration of antitoxin practically insures the patient's recovery, but any physician can cite case after case in which his first visit found the victim in too advanced a stage for antitoxin to effect a cure.

Health officials and physicians have a great responsibility in the need for education of the people in regard to the seriousness of diphtheria and scarlet fever. Immunizing methods for diphtheria — the antitoxin method for immediate and temporary immunization and the toxin-antitoxin method for delayed but lasting protection — need to be more fully known to the public and more generally employed in practice. Health authorities should make arrangements now for free distribution of antitoxin, which will be required under the Hughes Act and should long ago have been provided for by all local health boards.

A fight against these two diseases means the saving of many children's lives. Look over your community's diphtheria and scarlet fever death records for past years, and then decide whether you want that record repeated this winter.

* * *

Buy Your Share of Christmas Seals

Ohio this year is undertaking the sale of fifty million Red Cross Christmas seals, the largest quota ever assigned to the State in this annual campaign. The State Department of Health gives its full endorsement to this method of gaining funds for the anti-tuberculosis fight, and bespeaks the support of the public.

Every Christmas seal you buy forces the tuberculosis menace a little farther back. Buy seals as willingly as you bought Liberty Bonds.

* * *

Get a Copy of This Convenient Booklet

"What is the Hughes Act? Why was it passed?" These are questions which may be expected with great frequency in the next few months. To gather together in convenient form the facts which must be employed in answering these queries, the State Department of Health is issuing a pamphlet entitled: "The Hughes Act: Why It Was Passed — What It Is — What It Will Do For Ohio."

The new publication, issued as Health Education Bulletin 132, de-

scribes briefly the old local health administrative system of the State, pointing out its shortcomings, and presents a short digest of the Hughes Act, designed to give a better grasp of the main features of the new system than can be gained from a hasty reading of the law itself. It closes with a statement of concrete results which the law can be expected to produce.

The Department hopes to obtain wide distribution of the new pamphlet throughout the State, and will send copies free upon application.

* * *

Venereal Disease Campaign Is Progressing Steadily

The fact that less has been said in recent weeks than was said several months ago about the venereal disease control activities of the State Department of Health may have led some to wonder if the first enthusiasm has been dying out. We hasten to dispel any such idea, if it has developed, and to call attention to the fact that the continued interest in this program is one of its most encouraging features.

Venereal disease control work was undertaken in Ohio and in other states as a war measure, carried out originally by the military authorities who soon sought and obtained civilian co-operation. For this reason it naturally aroused the enthusiasm of the public more rapidly than is usual in the development of a new public health activity. It was one of the many means to be employed in the winning of the war, and the people rallied behind the campaign.

When the war ended the civil health authorities realized that the fruits of the early work must not be lost, and that the movement must continue as a public health activity, shorn of its military aspects. A diminution of public zeal might have been expected. But it has not occurred to any serious extent. The people were convinced by the war's disclosures, apparently, that venereal disease was sapping our national strength, and they are as determined in peacetime as in war to wipe out the menace.

Nowhere in Ohio have any serious reverses been encountered. The program has been extended, rather than contractd, since the close of hostilities. Public interest is still active, as the steady flow of requests for information and literature proves. Facilities for free treatment are being extended, educational work is steadily widening its scope and law enforcement continues on a firm basis in practically every community. The recent legislature enacted more drastic provisions for the control of prostitution and provided liberally for continued financial support of

the campaign. The State Department of Health has organized its venereal disease work so as to co-ordinate it fully with other Department activities and is now looking forward to the still greater advances which will come with the installation of the new district health departments, each of which is required by the Hughes Act to give special attention to venereal diseases.

Its development from the status of a novelty to that of a permanent phase of Ohio's public health program is the only reason for the slight drop in prominence which venereal disease work has suffered. It is now as firmly established and as thoroughly organized as is any other public health activity, and the program is being carried out as rapidly as possible with the whole weight of Ohio's public health organization behind it.

* * *

What a Doctor's Negligence Did to a Community

A certain Ohio physician has on his conscience the weight of seven cases of typhoid fever, and perhaps more, which resulted from his failure to report the case that marked the beginning of this outbreak and to instruct the patient's family in proper methods of guarding against spread of infection.

The original case was that of a discharged soldier who fell ill soon after returning home. The doctor who treated this patient recognized the case as typhoid fever. He ignored his responsibilities to the patient's family and to the public, however, and neglected to submit a case report to the health authorities. Uninstructed either by the physician or by health officials, (the latter, of course, were ignorant of the existence of the case), other members of the family contracted the disease through contact infection and neighbors likewise fell ill. Not until eight cases in all had occurred and the latest household infected had called another physician did the situation come to the attention of health authorities.

An investigation by a representative of the State Department of Health followed, and disclosed not only the facts mentioned, but also the additional information that the physician in the first case had permitted the family to continue shipping milk to a nearby city while typhoid fever was present in the household. Although it was impossible to follow the milk and learn definitely whether infection had been carried through this medium to the city, it is entirely possible that many more cases may have resulted in this manner.

And the physician's refusal to take the simple precaution which the law requires of him as a matter of duty to the public was the cause of it all. The moral is too obvious to be stated.

Help Make Hospital Registration Complete

Hospitals and dispensaries which were overlooked by the State Department of Health in mailing out its new registration blanks are requested to communicate with the Department. The best mailing lists which could be obtained were admittedly incomplete, and while numerous additions have been made since the first mailing there still are institutions, in all probability, which have not been reached.

The article on the new hospital registration and classification plan which appeared in last month's OHIO PUBLIC HEALTH JOURNAL made it clear that the Department has no idea of undertaking an unreasonable program of supervision over hospitals and dispensaries. Rather it will undertake to build up between the institutions and the health authorities a spirit of mutual helpfulness and of increased service to the public. For this reason the hope is expressed that the hospitals and dispensaries will co-operate with the Department in making the preliminary registration as nearly complete as possible.

* * *

Laboratories Make Many Wassermann Examinations

It is gratifying to note the steadily increasing monthly totals of Wassermann examinations made for the physicians of the State by the State Department of Health laboratories. Both the total of Wassermann examinations and the proportion of the total made for private physicians (as distinguished from State institutions and venereal disease clinics) have been rising month by month. If the present tendency continues the present fiscal year will produce a total volume of Wassermann work far beyond that for the preceding twelve months.

To reiterate previous statements, for the benefit of physicians who many not fully understand this comparatively new phase of the Department's laboratory work, we point out again that Wassermann examinations will be made free for any Ohio physician who submits blood specimens in accordance with the methods prescribed by the Department. The mailing outfits supplied free by the Department, which comply with postal requirements, must be used in submitting specimens. These outfits may be obtained direct from the Department offices in Columbus or from distributing stations in all parts of the State.

These laboratory facilities were installed more than a year ago as a feature of the Department's campaign against venereal diseases. In its efforts to bring about thorough treatment and cure of venereal disease victims, the Department needs the assistance of physicians and strongly urges them to avail themselves of its free laboratory service.

Some Things the Hughes Act Can Accomplish

THOUSANDS of Ohioans who will be alive in 1925 will owe their existence to the present legislature and to health officials placed in service throughout the State by the Hughes Act.

This prediction is seen to be reasonable as one considers some of the practical results which can be expected from the new local health organization. Among such probable effects of the Hughes Act are these:

A reduction, perhaps as great as fifty percent, in deaths of babies, which last year made up one-eighth of all Ohio deaths.

Almost complete wiping out of diphtheria deaths, which numbered 497 in 1918.

Halving in the next few years, and eventually still further decreasing, the typhoid fever death rate.

Gradual lowering of the mortality from tuberculosis, which causes one in every ten deaths in the State.

Heavy decreases in prevalence of venereal diseases, which rank with tuberculosis and pneumonia as Ohio's greatest health menaces.

Lowering of sickness and death rates from all the contagious and infectious diseases, including, besides those mentioned, such important ones as smallpox, measles, scarlet fever, whooping cough, meningitis and infantile paralysis.

General improvement in the physical condition of the next generation.

The achievement of these results is an entirely practical matter — as practical as the carrying out of a flood-control or canal project, in the opinion of the State Department of Health. Experience in other states and in foreign countries has demonstrated beyond all doubt that many of the diseases which lower our health and efficiency can be brought under control by the application of clearly understood principles of preventive medicine.

Lack of local health organization in the past has made it impossible to apply those principles in Ohio. This obstacle is removed by the Hughes Law, putting a corps of trained health workers into service in every county.

Ohio had 11,703 deaths of children under one year old last year. Authorities agree that one-half of such deaths could be prevented. Ohio is an average state in respect to infant mortality, but stands high in comparison with certain foreign countries and with several American states and cities which lead in protection of infant health. Minnesota, for example, had an infant mortality rate nearly one-third lower than Ohio's in 1917, and the city of San Francisco last year had a still lower record. By installing an extensive nursing service New Zealand brought about a 40 percent reduction in infant mortality in six years.

Important among the diseases which will be fought in the effort to reduce baby mortality are diarrhea and enteritis, which killed 2,952 Ohio children under five in 1918; whooping cough, responsible

for 644 such deaths; diphtheria, killed 253 at these ages, and pneumonia, which normally kills hundreds of babies each year and which killed 2,851 last year, including deaths resulting from the epidemic. Ailments incident to early infancy, among which are many preventable causes of death, had a 1918 death total of 4,032. Better control of contagious diseases and more extended public health nursing service will save the lives of many hundreds of babies, health officials say.

Diphtheria can be made a negligible cause of death in Ohio in a few years, it is hoped, through free distribution of antitoxin by all district health boards. Antitoxin is a practically certain cure for diphtheria if administered promptly after the onset of the disease. Immunizing treatment is also being employed with marked success as a diphtheria preventive. Experience with free antitoxin in cities of Ohio and other states bears out the department's prediction. The record of Salem, Ohio, is cited in this connection. Salem had 48 diphtheria deaths in the 10 years preceding 1900, and only one in the 10 years following. Free distribution of antitoxin, begun by the city board of health in 1900, caused the reduction.

Ohio's typhoid death rate has been practically stationary since 1915, although in the period from 1909 to 1915 the rate was halved. The explanation is that most of the cities now have comparatively low rates, while the rural districts continue high and have not been provided with the sanitary supervision which could reduce their rates. Activities of the new district health officers should bring speedy reductions. The record of California is an indication of what Ohio can do.

In 1914 California had a typhoid fever death rate approximately equal to that of Ohio today. Now, as a result of an intensive preventive campaign, its rate is only one-half as high as Ohio's.

No sudden reduction in tuberculosis is expected, but a gradual drop is considered certain to come with the extension of nursing activities and the establishment of new dispensaries and hospitals. Better education of the public in regard to health is counted upon to check tuberculosis as well as other diseases.

Venereal disease control activities, already well developed in some of the cities, will be extended to all localities under the new health system. The three-fold program of treatment, repression and education, carried out in co-operation with the federal government, will be continued. This is the program employed by the army during the war, with the result that new venereal cases developing after enlistment were only one-fifth as numerous as those present in the men at the time of enlistment. More than three and one-half percent of Ohio draftees, upon examination when they arrived at camp, were found venereally infected; this rate takes no account of cases cured previous to enlistment or developed later. The Ohio rate was one of the highest disclosed by the draft in northern states.

Better control methods for communicable diseases, made possible by more efficient local health organization, will facilitate the checking of epidemics in their early stages and hence will obviate much preventable sickness, according to expectations of the health authorities. Important among diseases which may thus be brought under

control is smallpox, which, although it caused only 22 deaths in 1918, had a reported case total of 10,322 for the year, with perhaps as many more cases unreported. More than 3,000 smallpox cases have been reported to date this year.

Defects which caused the rejection of nearly one-third of the men called in the draft were largely preventable. Proper supervision of their health in childhood would have made many of the rejected men fit for service. Health super-

vision of the schools, required of every board of health by the Hughes Act, is counted upon to reduce such defects among the rising generation. Rural districts are said to be in greatest need of this phase of public health work, many surveys having brought to light extremely bad health conditions among country children. Cities which have physical supervision programs in operation in their schools are found to have uniformly healthier children than country districts.

Ohio's Influenza Program

TO insure Ohio's preparedness for an influenza epidemic this winter, should one occur, the State Department of Health has formulated a state-wide program and plan of organization which will provide every county with means of combating the disease. Although the department believes a renewed outbreak comparable to that of a year ago to be improbable, it counts it as a possibility which the State must be ready to face.

The program provides for an anti-flu organization in every county, headed by the newly organized general district board of health of the county and working under the general supervision of the State health authorities. The State has been promised the assistance of the United States Public Health Service and of the American Red Cross in the event of an influenza epidemic.

Influenza control work in accordance with this program is the first definite duty assigned to the new district health boards. As

these boards do not assume office until January 1, any action they may take before that date will be unofficial in character. The county program, however, will be placed on an official basis by a scheme of co-operation between the county district boards and the present municipal and township health boards.

The program, as submitted to the district boards in a circular letter from the State Department of Health, makes each board the nucleus of its county organization to fight influenza. Each board that adopts the plan will select one of its members to act as head of the county organization. This representation will enlist the support of the health district advisory council, composed of mayors and township trustees' chairmen, each of whom is ex-officio chairman of the present local health board of his city, village or township.

Council members, by virtue of their connection with the existing health boards of the county, will be in a position to obtain united action by these bodies in accordance

with the county-wide program which is to be developed and to secure emergency appropriations if a need for them develops.

The organization developed in the county by the district board of health, acting unofficially, and the present legal health authorities will be charged with the responsibility of placing the county's facilities for fighting the possible epidemic at a point of highest efficiency. Each county will be expected to formulate its local program in advance, just as the State has formulated the general program.

Interruption of local anti-flu activities when present local health departments turn over their powers to the new district boards January 1 will be avoided by the adoption of the suggested program. This transfer might otherwise be attended by serious results if the opening of the new year should find the State in the midst of an epidemic.

State health supervisors, eight in number and each assigned to a district of eleven counties, will be the field agents of the State Department of Health in promoting the precautionary organization and in co-ordinating and unifying the county campaigns if an epidemic develops. They will serve under orders from the Department office at Columbus, thus insuring a united fight against disease.

City health departments of Ohio have been instructed by the State Department of Health to watch disease and death reports carefully throughout the fall and winter and to report immediately any indications of influenza. Not only clearly defined causes of "flu" are to be reported, according to the department, but also any abnormal increases in the general death rate, which may mask unrecognized cases of influenza.

United States Public Health Service aid in event of an epidemic this winter will take the same form as last year — supplying physicians for emergency duty in disease-stricken localities where local medical facilities are found inadequate. A reserve force of two hundred Ohio doctors will be recruited and held ready for such duty. Several hundred letters of inquiry regarding willingness to undertake such service have been sent to physicians in the State. Physicians so employed would work under the direction of the State and federal health authorities and their salaries and expenses would be paid by the latter.

The American Red Cross has adopted a national influenza program declaring its policy to be one of supplementing local, state and national public health authorities, especially in the provision of nurses and of emergency local facilities for the care of influenza victims. The Red Cross has announced its readiness to co-operate with official health protective agencies, and the State Department of Health expects to call for such co-operation if need arises. If an epidemic develops, a Red Cross liaison officer will be detailed from Lake Division headquarters at Cleveland for duty in the office of the State Department of Health.

In one state alone, the lessons from the war have made such an impression that while few public health sanatoriums existed prior to that time, forty such institutions have been created by popular vote within the past two years, each with its attendant dispensaries and community nursing service. — Dr. C. St. Clair Drake, Illinois Director of Public Health, in *Journal of the American Medical Association*.

Examinations for Health Commissioner

THE State Civil Service Commission's announcement in regard to examinations for district health commissioner gave the first official statement of the qualifications for these positions and of the classification of districts into five grades, corresponding to the five grades of commissionerships, with varying salary schedules, established by the commission.

The full statement of duties and qualifications of health commissioners of the various grades is printed herewith. No examination was announced for Grade I commissioner, as no general districts fall within this grade and the municipal district examinations will be conducted by city civil service commissions.

The examination was announced as of a non-assembled, competitive type, competitors to be rated on education, experience and publications or thesis, with the possibility that successful competitors might be summoned for oral interviews at designated points within their respective states.

The salary schedule fixes an initial rate for each grade, with automatic advances after specified periods of satisfactory service. The prescribed rates are: Grade I, first three years, \$6,000, second three years \$6,600; seventh and succeeding years \$7,200; Grade II, first three years \$5,000, second three years \$5,500, seventh and succeeding years \$6,000; Grade III, first two years \$4,000, second two years \$4,400, fifth and succeeding years \$4,800; Grade IV, first year, \$3,000, second year, \$3,300, third and succeeding years \$3,600; Grade V, first

year \$2,000, second year \$2,200, third and succeeding years \$2,400. Promotion from one grade to another to fill future vacancies in district health commissionerships is made possible by provision for admission of district health commissioners to future competitive examinations on the following basis:

Commissioners with two full years of Grade II experience shall be admitted to Grade I examinations.

Commissioners with two full years of Grade III experience shall be admitted to Grade II examinations.

Commissioners with one year of Grade IV experience shall be admitted to Grade III examinations.

Commissioners with one year of Grade V experience shall be admitted to Grade IV examinations.

The classification of the health districts is as follows:

GENERAL HEALTH DISTRICTS.

<i>Counties.</i>	<i>Grade.</i>	<i>Counties.</i>	<i>Grade.</i>
Adams	V	Gallia	IV
Allen	III	Geauga	V
Ashland	IV	Greene	IV
Ashtabula	III	Guernsey	IV
Athens	IV	Hamilton	II
Auglaize	IV	Hancock	III
Belmont	III	Hardin	IV
Brown	IV	Harrison	IV
Butler	III	Henry	IV
Carroll	V	Highland	IV
Champaign	IV	Hocking	IV
Clark	IV	Holmes	V
Clermont	IV	Huron	IV
Clinton	IV	Jackson	IV
Columbiana	III	Jefferson	III
Coshocton	IV	Knox	IV
Crawford	III	Lake	IV
Cuyahoga	III	Lawrence	IV
Darke	III	Licking	III
Defiance	IV	Logan	IV
Delaware	IV	Lorain	III
Erie	III	Lucas	III
Fairfield	III	Madison	IV
Fayette	IV	Mahoning	III
Franklin	III	Marion	III
Fulton	IV	Medina	IV

<i>Counties. Grade.</i>	<i>Counties. Grade.</i>
Meigs IV	Ross III
Mercer IV	Sandusky IV
Miami III	Scioto III
Monroe IV	Seneca III
Montgomery .III	Shelby IV
Morgan V	Stark II
Morrow IV	Summit III
Muskingum ..IV	Trumbull III
Noble IV	Tuscarawas ..IV
Ottawa IV	Union IV
Paulding IV	Van Wert IV
Perry IV	Vinton V
Pickaway IV	Warren IV
Pike V	Washington .III
Portage IV	Wayne III
Preble IV	Williams IV
Putnam IV	Wood III
Richland III	Wyandot IV

MUNICIPAL HEALTH DISTRICTS.

Akron III	Lima III
Canton III	Lorain IV
Cincinnati...II	Newark IV
Cleveland I	Springfield ...III
Columbus II	Toledo II
Dayton III	Youngstown .III
Hamilton IV	Zanesville IV

Following is the detailed statement of duties and qualifications of health commissioner of the various grades (including Grade I, for which no examination was announced):

GRADE I.

DUTIES: The incumbents of these positions, the duties of which require a very high degree of professional knowledge, administrative and constructive ability, initiative and independent judgment, are responsible for the administration of state and local provisions relating to public health and sanitation in General and Municipal Health Districts classified as Grade I. Supervise the study and recording of the prevalence of diseases, the diagnosis and control of communicable diseases, and the medical and dental inspection of school children; personally make general and special studies of health and sanitary conditions in the districts under their charge, and make such recommendation to the District Boards of Health as may be necessary to correct sanitary conditions; supervise the inspection of public charitable, benevolent, correctional and penal institutions and inspection of foods and places where food is manufactured, handled, stored or sold; direct the work of the laboratories in the examination and

analysis of specimens, the culture of serums, and any research work necessary to the preservation of the public health; direct such clinics, free dispensaries and detention hospitals as may be established; and supervise the work of dentists, bacteriologists, pathologists, inspectors, other professional employees, and clerks as may be assigned to their staffs.

QUALIFICATIONS: Only those applicants having the qualifications specified hereunder shall be admitted to examinations of this grade.

1. At least seven years of health experience in connection with some state, county or municipal health department, or in the Public Health Service of the United States Government, Army or Navy, three years of which must have been as the responsible head of a large modern health department, or as a whole time subordinate charged with administrative or executive responsibility.

2. Graduation from a medical college, school of public health, or school of sanitary engineering of recognized standing will be accepted in lieu of two years of the experience required above; but in no case shall credits thus given exceed two years.

3. This examination is open to all qualified applicants, citizens of the United States, between the ages of 35 and 60, both inclusive, without restriction as to residence.

4. Applicant must have a detailed knowledge of the fundamental principles of bacteriology, pathology, and preventive medicine, and of public health and sanitary procedure.

GRADE II.

DUTIES: The incumbents of these positions, the duties of which require a high degree of professional knowledge, administrative and constructive ability, initiative and independent judgment, are responsible for the administration of state and local provisions relating to public health and sanitation in General and Municipal Health Districts, classified as Grade II. Supervise the study and recording of the prevalence of disease, the diagnosis and control of communicable diseases, and the medical and dental inspection of school children; personally make general and special studies of health and sanitary conditions in the districts under their charge, and make such recommendations to the District Boards of Health as may be necessary to correct

insanitary conditions; supervise the inspection of public, charitable, benevolent, correctional and penal institutions, and the inspection of foods and places where food is manufactured, handled, stored or sold; direct the work of the laboratories in the examination and analysis of specimens, the culture of serums, and any such research work as may be necessary to the preservation of the public health; direct such clinics, free dispensaries and detention hospitals as may be established; and supervise the work of such deputy health commissioners, public health nurses, physicians, dentists, bacteriologists, pathologists, inspectors, other professional employes and clerks may be assigned to their staffs.

QUALIFICATIONS: Only those applicants having the qualifications specified hereunder shall be admitted to examinations of this grade.

1. At least five years of health experience in connection with some state, county or municipal health department, or in the Public Health Service of the United States Government, Army or Navy, two years of which must have been as the responsible head of a large modern health department, or as a whole time subordinate charged with administrative or executive responsibility.

2. Graduation from a medical college, school of public health, or school of sanitary engineering of recognized standing will be accepted in lieu of two years of the experience required above; but in no case shall credits thus given exceed two years.

3. This examination is open to all qualified applicants, citizens of the United States, between the ages of 35 and 60, both inclusive, without restriction as to residence.

4. Applicants must have a detailed knowledge of the fundamental principles of bacteriology, pathology, and preventive medicine, and of public health and sanitary procedure.

GRADE III.

DUTIES: The incumbents of these positions, the duties of which require a broad knowledge of public health problems, administrative and constructive ability, initiative and independent judgment, are responsible for the administration of state and local provisions relating to public health and sanitation in General and Municipal Health Districts, classified as Grade III. Supervise the study and recording of the

prevalence of diseases, the diagnosis and control of communicable diseases, and the medical and dental inspection of school children; personally make general and special studies of health and sanitary conditions in the districts under their charge, and make such recommendations to the District Boards of Health as may be necessary to correct insanitary conditions; supervise the inspection of public, charitable, benevolent, correctional and penal institutions, and the inspection of foods and places where food is manufactured, handled, stored or sold; direct the work of the laboratories in the examination and analysis of specimens, the culture of serums, and any such research work as may be necessary to the preservation of the public health; direct such clinics, free dispensaries and detention hospitals as may be established; and supervise the work of such deputy health commissioners, public health nurses, physicians, dentists, bacteriologists, pathologists, inspectors, other professional employes and clerks as may be assigned to their staffs.

QUALIFICATIONS: Only those applicants having the qualifications specified hereunder shall be admitted to examinations of this grade.

1. Graduation from a medical college of recognized standing; and

2. At least two years of whole time experience in public health work in connection with some state, county or municipal health department or in the public health service of the United States Government, Army or Navy; or

3. Part time public health experience in health jurisdiction of 5,000 population or more and requiring at least one-third of the incumbent's time, will be credited on the basis of one year in four, and applied in lieu of the whole time experience required in No. 2, preceding. In no case shall credit be allowed for an aggregate of more than two years; or

4. Completion of a course in public health in a school of recognized standing will be accepted in lieu of one year of the experience required above.

5. This examination is open to all qualified applicants, citizens of the United States, between the ages of 30 and 60, both inclusive, without restriction as to residence.

6. Applicants must have a thorough knowledge of the fundamental principles of bacteriology, pathology, and preventive medicine, and of public health and sanitary procedure.

GRADE IV.

DUTIES: The incumbents of these positions, the duties of which require a knowledge of, and experience in, the administration of public health measures, executive capacity, initiative and independent judgment, are responsible for the administration of state and local provisions relating to public health and sanitation in General and Municipal Health Districts, classified as Grade IV. Supervise and make studies, looking to the control and eradication of communicable diseases; direct the medical and dental inspection of school children and the inspection of public and quasi public institutions, the inspection of foods and places where food stuffs are manufactured or sold, make studies of the health and sanitary conditions in the districts under their charge, and make such recommendations to the District Boards of Health as are deemed expedient for the preservation of the public health; direct the work of such clinics, free dispensaries and detention hospitals as may be established, and supervise the work of such subordinate employes as may be assigned to their staffs.

QUALIFICATIONS: Only applicants having the qualifications specified hereunder shall be admitted to examinations of this grade.

1. Graduation from a medical college of recognized standing; and

2. At least one year of public health experience in connection with some state, county or municipal health department or in the public health service of the U. S. Government, Army or Navy.

3. Completion of a course of instruction in public health in a college or university of recognized standing will be accepted in lieu of the experience required in No. 2, preceding; or

4. Part time public health experience in health jurisdictions of 5,000 population or more and requiring at least one-third of the incumbent's time, will be credited on the basis of one year in four, and applied in lieu of the whole time experience required in No. 2, preceding. In no case shall credit be allowed for an aggregate of more than one year.

5. This examination is open to all qualified applicants, citizens of the United States, between the ages of 25 and 55, both inclusive, without restriction as to residence.

6. Applicants must have comprehensive knowledge of the fundamental principles of bacteriology, pathology, and preventive medicine, and general knowledge of public health and sanitary procedure.

GRADE V.

DUTIES: The incumbents of these positions, the duties of which require a knowledge of, and experience in, the administration of public health measures, executive capacity, initiative and independent judgment, are responsible for the administration of state and local provisions relating to public health and sanitation in General and Municipal Health Districts, classified as Grade V. Supervise and make studies, looking to the control and eradication of communicable diseases; direct the medical and dental inspection of school children and the inspection of public and quasi public institutions, the inspection of foods and places where food stuffs are manufactured or sold; make studies of the health and sanitary conditions in the districts under their charge, and make such recommendations to the District Boards of Health as are deemed expedient for the preservation of the public health; direct the work of such clinics, free dispensaries, and detention hospitals as may be established, and supervise the work of such subordinate employes as may be assigned to their staffs.

QUALIFICATIONS:

1. Graduation from a medical college of recognized standing.

2. Additional credit will be given for experience in public health work. Part time experience in such work in health jurisdictions of 5,000 population or more and requiring at least one-third of the incumbent's time, will be credited on the basis of one year in four, not exceeding an aggregate of one year. Additional credit will also be given for completion of a course of instruction in public health in a college or university of recognized standing.

3. This examination is open to all qualified applicants, citizens of the United States, between the ages of 25 and 50, both inclusive, without restriction as to residence.

4. Applicants must have a comprehensive knowledge of the fundamental principles of bacteriology, pathology and preventive medicine, and general knowledge of public health and sanitary procedure.

Lead Poisoning as a Factor in Chronic Disability

By E. B. Starr, M. D., Director, Division of Industrial Hygiene,
Ohio State Department of Health.

LEAD poisoning is the oldest known, the most thoroughly studied and the commonest of all occupational poisonings. Yet, it is safe to say that lead as a causative factor in chronic disability is seldom thought of by the practitioner of medicine. It cannot be charged that the subject has been neglected in medical literature or in medical teaching. Every doctor knows there is such a thing as lead colic and wrist drop. But it would appear that few realize as they should the importance of the less obvious and spectacular symptoms produced by lead intoxication.

By far the great majority of occupational diseases are of a chronic nature and are seldom diagnosed as such. Unfortunately for the lead poisoned patient, his symptoms in the main are of a chronic character and only occasionally become acute. For this reason many a patient goes from doctor to doctor being treated for rheumatism, gastric and intestinal dyspepsia, anorexia, anemia, vertigo, headache, diplopia, impairment of vision, temporary or permanent blindness, tinnitus aurium, muscular, joint and diverse neuralgic pains, tremors, loss of weight and strength, arterio sclerosis, heart disease and finally becomes prematurely senile, unable to support himself and family and is placed on the shelf with the rest of the chronics.

It would seem that lead poisoning

and the many other diseases of occupation will only receive their due weight of importance when the medical profession comes to recognize more fully than it does today that a third of the daily cycle of every adult patient's life is spent in the prosecution of some occupation and that there are certain influences incident thereto which react on health in a more or less deleterious manner. If industrial workers are to receive the best of medical services from the profession the doctor will need to take more interest in the occupational phase of his patient's life than is ordinarily manifested by the proverbial question of the history blank, "What is your occupation?" It is essential that the inquiry in every obscure, chronic case shall proceed much further and include questions that would bring out the hours of labor and the amount of sleep; the particular process involved in the patient's work. This latter is doubly important in view of the tendency in modern industry to assign workers to particular processes rather than to work which is more or less involved. The physician should want to know what materials enter into the process; whether liquids, gases, fumes or dust are present, and the nature of such; the length of employment and exposure to hazards; whether the patient is working at piece work and whether over-fatigue is likely

to be a factor in the patient's condition; whether the work place is over-crowded, under-lighted or ventilated, and such other questions relating to temperature, dampness, etc., as may suggest themselves.

It is not expected that the physician will at once understand the use of materials, the various processes and the particular hazards to health connected with the various occupations. There are textbooks on the subject, however, which will be very helpful in ascertaining the hazards present in many of the industries. Every practicing physician, if he has not already done so, should provide himself with some standard work on the subject to which he can refer as occasion demands. It is always an advantage when possible to study the patient while at work, thereby gaining information which is often invaluable in understanding the case.

The wide use in industry of lead, its salts and its oxides will give some idea of the potential dangers from this source incident to industrial employment. In her investigation of lead poisoning in Illinois, Dr. Alice Hamilton found seventy industries to which lead poisoning could be traced. Hayhurst, in his *Survey of Industrial Health Hazards and Occupational Diseases in Ohio* in 1914-1915 found eighty industrial processes in which lead was a hazard to health. Furthermore, there is practically no industry in which lead is not used at some time or other.

A few studies that were made in one industry may be of interest as illustrative of the importance of the occupational side of chronic disability. The pottery industry in Ohio furnishes this illustration. In 1914 Dr. E. R. Hayhurst, assisted by Dr. R. P. Albaugh and others,

made an investigation of lead poisoning in forty-seven potteries in East Liverpool, Zanesville, Crooksville, Sebring, Wellsville, Cambridge, Steubenville, Salem, Coshoc-ton and Roseville. Dr. R. P. Albaugh has summarized their findings somewhat as follows: Out of a total of 8,146 employees 2,585 were found to be working in processes which were regarded as being more or less hazardous from the presence of lead. Of the 2,585 persons exposed in these processes, 109 were found to be suffering from lead poisoning, giving a morbidity rate of 42.2 per thousand exposed. Tables I, II and III give the distribution of lead poisoning by age groups, length of exposure and occupational processes.

By reference to Table I, it will be noted that between the ages of forty-five and forty-nine, but seventy-eight men were engaged at work in the dangerous processes and but fifty-five men who were fifty years and over in age were so engaged, or 113 in the age-group beyond forty-five years. By a simple calculation it may be seen that 5.1 percent of the 2,585 exposed employees were over forty-five years of age. This ratio is abnormally small and indicates that workers in these processes leave the industry for some cause before passing middle life. Note also the high rate of poisoning as affecting those of forty-five and over. Of those over forty-five years of age 16.8 percent were suffering from lead poisoning. The influence of length of exposure is shown in Table II. Likewise the influence of especially hazardous processes in Table III where the rate of intoxication in "Glaze Dippers" is given as 126.5 per thousand exposed and 176.5 as the rate per thousand in "Glaze Mixers."

During the fore part of this year the United States Public Health Service made a careful study of the potteries in New Jersey, Pennsylvania and Ohio. In the Ohio study an effort was made by the investigators to seek out the 109 cases found by Hayhurst in 1914. Fifty out of the 109 men were still working in the potteries; forty of whom were still definitely leaded. Of the

fifty-nine who were not working in the potteries no information was obtainable about thirty-five. Of the twenty-four others, five were found to have died, cause not stated, and the rest to have sought other employment, chiefly in farming, teamstering, insurance and iron founding, while two of them found employment in a pottery where lead is said not to be used.

TABLE I.—DISTRIBUTION OF LEAD POISONING BY AGE GROUPS IN OHIO POTTERIES, 1914

<i>Age groups</i>	<i>Total exposed to lead</i>	<i>Total cases</i>	<i>Rate per 1,000</i>
Under 20	75	5	66.7
20-39	2,053	66	32.1
40-44	324	19	58.6
45-49	78	8	102.6
Over 50	55	11	200.0
Total	2,585	109	42.2

TABLE II.—DISTRIBUTION OF LEAD POISONING BY LENGTH OF EXPOSURE TO HAZARDOUS PROCESSES IN OHIO POTTERIES, 1914.

<i>Length of exposure</i>	<i>Total cases</i>	
Under 1 yr.	6	2-3 yrs. 13
1-2 yrs.	7	3-4 yrs. 6
		4-5 yrs. 9
		5-10 yrs. 25
		10-15 yrs. 19
		Over 15 yrs. 24
		Total 109

TABLE III.—DISTRIBUTION OF LEAD POISONING ACCORDING TO OCCUPATIONAL PROCESS IN OHIO POTTERIES, 1914

<i>Occupation</i>	<i>Total exposed</i>	<i>Total cases</i>	<i>Rate per 1,000</i>
Decorating and tinting.....	1,217	7	5.8
Fettling	311	2	6.4
Glaze dipping	245	31	126.5
Glaze mixing	51	9	176.5
Glost kiln	474	36	7.6
Dipper's helper	205	19	92.7
Straining glaze	37	1	27.0
Washing saggars	45	4	88.8
Total	2,585	109	42.2

NEWS OF THE DEPARTMENT

GLEANED FROM DIVISIONAL REPORTS FOR SEPTEMBER

DIVISION OF COMMUNICABLE DISEASES

During September the activities of the division were directed largely to the organization of the general health districts under the Hughes Act.

The trachoma survey of school children in Scioto County was continued. The percentage of children affected with trachoma in Portsmouth was one, as compared with three per cent of children in the rural part of the county.

Typhoid fever has been unduly prevalent in Lima. A thorough epidemiological investigation September 3 and succeeding days disclosed a particular dangerous state of affairs. One of the large milk concerns in Lima secured part of its supply from Harrod, where cases of typhoid fever had been occurring all summer but had not been reported to the health officer, with the result that families so affected continued to sell milk to the Lima concern. Absolute proof that milk was the source of typhoid fever in Lima could not be secured, but the possibility of such an occurrence must always be borne in mind. Any person with typhoid fever in his family, who sells milk or produces it for sale, is violating the State law. Moreover, such a person is required by State law to report such typhoid fever to the health officer having jurisdiction where such milk is sold. Better dairy and food inspection, safer milk and food supplies and less typhoid fever will result from the

organization of the State under the Hughes Act. The milk ordinance of Lima is defective in several particulars and suggestions were made for its amendment in regard to water supplies and sewage disposal at dairy farms; the use of small-top pails was recommended, and an increase in pasteurization requirements was suggested.

A nasty typhoid situation in Rarden Township, Scioto County, was disclosed by an investigation made by the district health supervisor. Seven cases were found in five families, all living on one farm as tenants. Methods of sewage disposal were most primitive, the privies being neither water-proof nor fly-proof. Water was secured from surface wells with practically no protection from contamination, and drainage was almost invariably towards, rather than away from, the well. The houses were not screened, nor were the cases properly isolated. Every condition was favorable for the spread of the disease by contact, direct and indirect. Samples of water submitted to laboratory examination showed marked evidence of gross pollution. A public health nurse was sent to instruct the families in the proper methods of nursing to prevent the further spread of the disease. The individual who owned the large farm was required to place the homes of his tenants in sanitary condition by constructing water-proof, fly-tight privies, by securing new and safe sources of

water supply and by screening the houses. This is another condition which could scarcely exist in the jurisdiction of an adequate health organization.

An outbreak of scarlet fever developed in the Fairfield County Children's Home, and was investigated on September 23. Nine cases were found. Because of the inadequacy of the township health department, the health officer of Lancaster was in charge of the outbreak. Daily inspection of all inmates and isolation of suspicious cases was recommended. Directions were given concerning concurrent disinfection of patients' discharges, clothing and table utensils. The employment of an additional nurse was also recommended.

An outbreak of food poisoning among guests and employees of the Canton Lakeside Country Club was investigated in the early part of September. Twelve definite cases of poisoning were found and eight deaths occurred. A careful epidemiological survey of the cases showed that the only food restricted to those who were poisoned was ripe olives. The original container and several olives from the same lot used at the dinner were examined, a toxin corresponding to the toxin of *B. botulinus* was found and this organism was also isolated and identified. Steps have been taken to prevent the sale of all ripe olives of this brand until further investigation has been made. A later outbreak of food poisoning in Michigan was traced to the same source, and *B. botulinus* was also isolated and identified.

Reported Cases of Notifiable Diseases

PREVALENCE.—In order of greatest reported prevalence during the

month of September, the notifiable diseases list as follows, with comparative figures given for August.

REPORTED CASES.

Disease.	September.	August.
1. Diphtheria ...	655	392
2. Tuberculosis		
All Forms...	532	605
3. Typhoid Fever	454	474
4. Scarlet Fever.	423	260
5. Whooping		
Cough	420	641
6. Gonorrhea ...	304	402
7. Ophthalmia Neonatorum ..	167	139
8. Measles	164	271
9. Syphilis	150	196
10. Influenza	133	25
11. Smallpox	119	107
12. Chickenpox ..	111	53
13. Mumps	73	89
14. Pneumonia,		
Acute Lobar	58	41

For no other one notifiable disease was a total of more than 50 cases reported during September. The total of all cases reported, as shown in Table I, is 4,022, — lower by a thousand cases than the number of reported cases for September of last year. The receipt of reports from health officers compares in promptness and completeness with the receipt during past months, there being no noticeable laxity, for instance, due to health district organization. Health officers should insist upon the necessity of reporting all cases of notifiable diseases to them up to the date of perfecting the district organization.

TYPHOID FEVER.—Reports for September total less than half the number of reported cases for September of last year, 454 and 986 respectively. From cities 159 of the 454 cases were recorded, 35 per cent for cities. Lima reported the largest number of cases, 17; Cleveland next largest, 13; Youngstown 11, Dayton 8, Akron, Cincinnati, Columbus and Piqua 7 each,

Ironton 6, Mansfield, Niles and Steubenville 5 each, a total of 98 cases from the twelve cities. No other city reported five or more cases.

TRACHOMA.—Of the 137 reported cases of trachoma 114 were

recorded as a result of a survey in the schools of Scioto County, leaving 23 as the number reported for the month from the rest of the State to compare with reports of 28 and 25 cases for September, 1918 and 1917.

TABLE I.—REPORTED CASES OF NOTIFIABLE DISEASES, OHIO, SEPTEMBER, 1917-1919, WITH DISTRIBUTION FOR CITIES AND FOR VILLAGES AND TOWNSHIPS, SEPTEMBER, 1919, AND CASE RATES PER THOUSAND POPULATION, SEPTEMBER, 1917-1919.

Disease	September, 1919			September, 1918	September, 1917	Sept. Case Rates Per Thousand Population		
	Cities	Villages and Townships	Total			1919	1918	1917
All Notifiable Diseases.....	2,787	1,235	4,022	5,024	4,392	.756	.954	.843
Chickenpox	86	25	111	74	137	.021	.014	.026
Diphtheria	543	112	655	495	861	.123	.094	.165
Gonorrhea	287	17	304	654	187	.057	.124	.036
Influenza	60	73	133	*	*	.025	*	*
Measles	112	52	164	237	121	.031	.045	.023
Measles, German.....	.....	3	3	17	9	.001	.003	.002
Meningitis, Cerebrospinal...	8	8	16	20	25	.003	.004	.005
Mumps	26	47	73	117	59	.014	.139	.011
Ophthalmia Neonatorum....	159	8	167	145	114	.031	.028	.022
Pneumonia, Acute Lobar....	42	16	58	143	79	.011	.027	.015
Pneumonia, Broncho.....	7	6	13	*	*	.002	*	*
Poliomyelitis	2	6	8	47	79	.002	.009	.015
Scarlet Fever	233	190	423	394	394	.080	.075	.076
Smallpox	61	58	119	116	178	.022	.022	.034
Syphilis	144	6	150	392	74	.028	.074	.013
Trachoma	48	89	137	28	25	.026	.005	.005
Tuberculosis, All Forms....	469	63	532	519	517	.101	.099	.099
Typhoid Fever	159	295	454	986	695	.084	.187	.132
Whooping Cough	296	124	420	495	800	.079	.094	.153
Other Notifiable Diseases...	45	37	82	145	38	.015	.028	.007

* Not notifiable.

TABLE II.—REPORTED CASES, TEN NOTIFIABLE DISEASES, WITH CASE RATES PER 1,000 POPULATION, OHIO CITIES, SEPTEMBER, 1919.

City.	Total Case Rate Per 1000 Pop- ulation.	Total Reported Cases.	Diphtheria.	Measles.	Meningitis, Cerebrospinal.	Pneumonia, Acute Lobar.	Poliomyelitis.	Scarlet Fever.	Smallpox.	Tuberculosis, all forms.	Typhoid Fever.	Whooping Cough.
Total	.64	1,927	543	112	8	42	2	233	61	471	159	296
Akron	1.51	137	4	4	...	1	...	8	2	33	7	78
Alliance	.34	7	3	1	...	...	...	...	...	2	1	...
Ashland	.32	3	1	...	...	...	...	...	...	...	2	...
Ashtabula	.22	5	2	2	...	...	...	...	...	1	...	...
Athens	.13	1	1	...	...	...	...	...	...	...	...	...
Barberton	.85	12	7	...	...	...	...	1	...	2	2	...
Bellaire	.38	6	2	...	...	...	...	1	...	2	1	...
Bellefontaine	.62	6	...	1	...	...	...	...	...	3	2	...
Bellevue	.64	4	1	...	...	...	...	2	...	1	...	...
Bowling Green...	.19	1	...	...	...	...	...	...	...	...	1	...
Bucyrus	.52	5	...	...	...	...	...	4	1	...	...	...
Cambridge	.56	8	4	...	...	...	...	2	...	1	1	...
Canton	.38	27	8	...	...	...	...	2	10	6	1	...
Chillicothe	.38	6	1	...	...	...	...	1	...	1	3	...
Cincinnati	.55	277	78	14	...	1	...	30	5	117	7	25
Circleville *	...	...	...	...	...	...	...	...	...	...	...	...
Cleveland	.58	576	255	16	4	32	2	33	14	137	13	70
Columbus	.23	58	12	...	...	...	...	20	...	15	7	4
Conneaut	.32	3	2	...	...	...	...	1	...	...	...	...
Coshocton	.08	1	1	...	...	...	...	...	...	...	...	...
Dayton	.48	68	20	1	1	1	...	9	...	20	8	8
Defiance	.27	2	...	...	...	...	...	1	...	1	...	...
Delaware	.29	3	2	...	...	...	...	...	...	...	1	...
Delphos	.18	1	...	...	...	...	...	1	...	...	...	...
Dover	.13	1	...	...	...	...	...	...	...	1	...	...
East Cleveland...	.39	6	3	...	...	...	...	3	...	...	...	...
East Liverpool...	.21	5	...	...	...	...	...	5	...	...	...	...
Elyria	2.06	42	...	42	...	...	...	...	...	...	...	...
Findlay	.47	7	2	...	...	...	...	...	1	3	1	...
Fostoria	.09	1	...	...	...	...	...	...	...	...	1	...
Fremont	.39	4	...	...	...	1	...	...	...	...	1	2
Galion	.69	5	4	...	...	...	...	...	...	1	...	...
Gallipolis *	...	...	...	...	...	...	...	...	...	...	...	...
Greenville	.14	1	...	...	...	...	...	...	...	1	...	...
Hamilton	.77	35	12	1	...	...	...	11	3	5	3	...
Ironton	.91	13	1	...	...	...	...	1	5	...	6	...
Jackson	.64	4	2	...	...	...	...	2	...	...	...	...
Kenton	.13	1	...	...	...	...	...	1	...	...	...	...
Lakewood	.18	3	2	...	...	...	...	...	...	1	...	...
Lancaster	.35	6	1	...	...	...	...	...	...	4	1	...
Lima	1.05	35	12	...	...	...	...	3	...	3	17	...
Lorain	.22	9	3	...	...	...	...	3	...	3	...	...
Mansfield	.51	12	...	...	...	...	...	...	...	4	5	3
Marietta	.54	7	4	...	...	...	...	...	...	...	3	...
Marion *	...	...	...	...	...	...	...	...	...	...	...	...
Martins Ferry...	.58	6	...	...	...	...	...	1	...	2	3	...
Massillon	.52	13	4	3	...	...	...	...	...	4	2	...
Middletown	.66	11	1	...	1	...	...	5	...	3	1	...

TABLE II.—REPORTED CASES, TEN NOTIFIABLE DISEASES, WITH CASE RATES PER 1,000 POPULATION, OHIO CITIES, SEPTEMBER, 1919—Concluded.

City	Total Case Rate Per 1,000 Population	Total Reported Cases	Diphtheria	Measles	Meningitis, Cerebrospinal	Pneumonia, Acute lobar	Poliomyelitis	Scarlet Fever	Smallpox	Tuberculosis, All Forms	Typhoid Fever	Whooping Cough
Mt. Vernon.....	.18	2	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Nelsonville.....	.75	5	.....	.....	.....	.....	.....	2	.....	.....	3	.....
New Philadelphia*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark.....	.16	5	.....	.....	.....	.....	.....	2	.....	2	1	.....
Niles.....	.71	6	.....	.....	.....	.....	.....	1	.....	.....	5	.....
Norwalk.....	.23	2	.....	.....	1	.....	.....	.....	.....	.....	1	.....
Norwood.....	.52	13	.....	4	.....	.....	.....	4	.....	2	.....	3
Painesville.....	.17	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Piqua.....	.11	15	1	.....	.....	1	.....	2	.....	4	7	.....
Portsmouth.....	.12	35	10	.....	.....	.....	.....	14	2	5	4	.....
Ravenna.....	.15	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Bernard.....	.31	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
St. Marys.....	.33	2	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Salem.....	.15	15	.....	.....	.....	.....	.....	.....	.....	4	.....	11
Sandusky.....	.19	4	.....	.....	.....	2	.....	1	.....	.....	1	.....
Sidney.....	.11	8	3	.....	.....	.....	.....	.....	.....	2	.....	.....
Springfield.....	.39	22	1	.....	.....	.....	.....	2	.....	11	3	5
Steubenville.....	.66	20	6	.....	.....	1	.....	3	2	3	5	.....
Tiffin.....	.78	10	2	1	.....	1	.....	.....	1	2	1	2
Toledo.....	.86	173	36	15	.....	1	.....	27	.....	26	3	65
Troy.....	.47	3	1	.....	.....	.....	.....	.....	.....	1	1	.....
Urbana.....	.81	7	.....	.....	.....	.....	.....	1	.....	6	.....	.....
Van Wert.....	.76	6	1	4	.....	.....	.....	.....	.....	1	.....	1
Wapakoneta*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren.....	.11	15	4	.....	.....	.....	.....	3	1	3	4	.....
Washington C. H.*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wellston.....	.43	3	2	.....	.....	.....	.....	.....	.....	.....	1	.....
Wellsville*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wooster.....	.16	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Xenia.....	.12	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Youngstown.....	.9	100	20	2	1	.....	.....	16	12	19	11	19
Zanesville.....	.16	5	.....	1	.....	.....	.....	.....	1	2	1	.....

* No cases of the diseases listed reported during the month.

DIVISION OF INDUSTRIAL HYGIENE

OCCUPATIONAL DISEASES reported to division: Lead poisoning, six cases, three employed in plants engaged in corroding lead, two in plants engaged in the manufacture of storage batteries and one in which industry was not stated. One case of wood alcohol poisoning was

reported as occurring in a woman employed in a furniture factory. Of the 461 cases of tuberculosis reported to the State Department of Health in September, 195 (incomplete) occurred among industrial workers. (The number of cases of occupational disease reported

should not be taken as an index of occupational disease prevalence.)

INVESTIGATIVE WORK INCLUDED: Investigation of a case of supposed anthrax; investigation into the character of medical supervision in three plants operating under the "Lead Law"; investigation of four public nuisances; continuance of the investigation of "rubber dermatitis".

CONSULTING SERVICES: Re industrial nursing; Civil Service Commission examination; organization of industrial medical serv-

ice; glue infection; health officers' extension course; qualifications of personnel for industrial medical services.

PUBLICITY AND EDUCATIONAL WORK: Thirteen lectures to thirty-five students taking extension course in public health; teaching personal hygiene to forty University students; pictures furnished for educational purposes; literature distributed (pieces) 203; advice given in response to requests in nine instances; regular monthly abstracts for the *American Journal of Public Health*.

DIVISION OF HYGIENE

Bureau of Tuberculosis

Notification of tuberculosis hospital admissions and discharges received in September are tabulated as follows:

<i>Institution.</i>	<i>Admissions.</i>	<i>Discharges.</i>
Ohio State San....	49	38
Butler Co. San....	1	1
Franklin Co. San..	24	28
Lucas Co. Tbc. Hos.	14	31
Dayton Dist. Hos..	8	5
Lima Dist. Hos....	4	4
Springfield Dist. Hos.	28	10
Springfield Lake San.	25	43
Mt. Logan San....	3	4
Rocky Glen San....	13	3
St. Anthony's Hos.	6	3
Total	175	170

The Director attended the Mississippi Valley Conference on Tuberculosis at Des Moines, Iowa, September 22 to 24, and conferred at Cincinnati September 12 with the committee appointed by the Ohio Tuberculosis Hospital Superintendents' Conference to draw up minimum standards for tuberculosis hospitals.

Bureau of Child Hygiene

Negotiations with the Lake Division of the Red Cross were conducted during the month, with a view to working out a co-operative

arrangement for carrying out the Junior Red Cross health league program.

Two meetings of the State Child Welfare Committee were held and the chief conferred with child welfare workers in several cities of the State in regard to their respective local situations. In a visit to Xenia it was learned that Greene County was thoroughly organized for the "back-to-school" drive, with fifty-two women doing active work.

Bureau of Nursing

Changes in the local public health nursing service of the State in September included the following:

Zanesville.—Mrs. Margaret Gibbons resigned as public health nurse and was succeeded by Miss Jennie Lyons.

Alliance.—Mrs. Mary J. Taylor resigned as school nurse. Miss Alice Haviland of Salem is school nurse this year and Miss Catherine Bonner is public health nurse.

Painesville.—Miss Eleanor Loomis has been appointed school nurse by the American Red Cross.

Akron.—Miss Isabel Robb has resigned as superintendent of nurses with the B. F. Goodrich Company.

Piqua.—Miss Helen Voltmer has been appointed public health nurse.

Jefferson County.—Miss Beatrice Robitaille has been appointed county nurse by the American Red Cross.

In the State Department of Health, Miss Annie J. Cunningham and Miss Jessie L. Chapman have been appointed district supervising nurses. Miss Cunningham has been in the employ of the Ohio Society for the Prevention of Tuberculosis and is loaned to the Department by that organization. Miss Chapman was prevention of blindness nurse in the Department until her promotion to the new position. She has been succeeded in her former post by Miss Mabel Green. Mrs. Jean K. Graham has resigned from the Department nursing staff. Mrs. Zoe McCaleb has been employed to assist in trachoma survey work being conducted by the Division of Communicable Diseases.

Representatives of the Bureaus were in touch with women's organizations in various communities during the month, explaining the Hughes Act organization and making arrangements for continued co-operation of these bodies in nursing work.

Prevention of blindness cases reported in September totaled 145, of which 135 were white and 10 colored. Twenty-five cases were reported by physicians, 41 by midwives, 19 by nurses, 57 by institutions and three by both nurses and physicians. Instructions were telephoned to health officers in six cases and five cases were investigated by Department nurses. Three cases of specific gonorrheal ophthalmia were discovered. Distribution of prophylactic outfits by the Division of Laboratories totaled 6,953.

Bureau of Venereal Diseases

The twenty-four venereal disease clinics in the State treated 3,205 patients in September. New admissions in the month, totaling 764, are tabulated as follows:

<i>Disease</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Syphilis	216	126	342
Gonorrhea	330	51	381
Chancroid	37	4	41
	583	181	764

The total number of treatments given at all clinics was 11,460. Cleveland City Hospital led in number of treatments, with 2,569, and the Akron clinic was second with 2,351. Toledo, with 1,244 treatments, had the only other total above 1,000 for the month. Arsphenamine treatments totaled 1,506.

Dr. C. E. Robbins assumed charge of the Chillicothe clinic upon the departure of Dr. Edgar Thompson to take a full-time position at Akron. Chillicothe citizens were found to be anxious for the clinic to continue.

Employment of an assistant physician at the Cincinnati clinic was decided upon after conference with Health Officer Peters of that city.

Bureau of Hospitals

Registration was inaugurated by mailing registration forms to 348 hospitals and thirty dispensaries, September 24. By October 1, forty hospitals and three dispensaries had completed their registration. The bureau conducted an exhibit at the twenty-first annual conference of the American Hospital Association in Cincinnati September 8 to 12.

DIVISION OF LABORATORIES

The Division made 3,485 examinations in September, of which 3,257 were bacteriological and 228

were chemical. The bacteriological examinations are classified as follows:

Diphtheria, pos. 33, neg. 147,	
sus. 25, no growth 6.....	211
Tuberculosis, pos. 107, neg. 333,	
sus. 2.....	442
Typhoid, pos. 41, neg. 108, sus. 35.	184
Wasserman, pos. 447, neg. 1,505,	
unsat. 151.....	2,103
Gonorrhea, pos. 20, neg. 43,	
unsat. 2.....	65
Malaria, pos. 0, neg. 6.....	6
Rabies, pos. 9, neg. 7, unsat. 2...	18
Water	224
Miscellaneous	4

Of the Wassermann tests, 645 were for venereal disease clinics, 508 for institutions and 950 for private physicians.

Outfits were distributed in the following quantities: Diphtheria 350, tuberculosis 838, typhoid 588, Wassermann 2,542, gonorrhea 275, inflammation of eyes 13, malaria 65, feces 13, miscellaneous 25, chemical water 2, quarts 6, bacteriological water 238, triple typhoid vaccine 651, media 39, ophthalmia 6,953.

Thirty food samples were examined in the chemical laboratory, with the following results: Satisfactory 13, misbranded 3 (two lemon extract and one miscellaneous extract), adulterated 10 (one cider, four milk, five vinegar), insufficient information 4.

Reports on 20 drug samples were: Satisfactory 9, misbranded 2 (proprietary), adulterated 7 (two camphor liniment, three castile soap, one sodium phosphate, one proprietary), insufficient information 2.

DIVISION OF PLUMBING

The Division made 92 inspections and collected fees amounting to \$256.50 in September. Four conferences were attended, six investigations were made, one order was issued, nine sets of plans were approved and 48 certificates of approval were issued.

BUREAU OF PUBLICITY

Sixteen publicity articles were issued in September. The weekly News Letter was suspended during the month, on account of the removal of the Department offices from the University campus to the new downtown location.

Distribution of publications totaled 22,676, venereal disease literature making up the greater part of this total.

Nine books were added to the Department Library.

PUBLIC HEALTH NOTES FROM OVER THE STATE

Adopt "Flu" Regulations

Health Commissioner Rockwood of Cleveland has announced influenza regulations which provide for:

Quarantine of households where influenza is present.

Isolation of influenza patients in the home.

Exclusion of members of the household from places of public gathering while quarantine is in force.

Issuance of permits to leave the house to wage earners and school children free from symptoms of respiratory disease, if conditions in the quarantined house are satisfactory.

Observance of precautions against transmission of disease by coughing and sneezing.

Destruction of nose and mouth discharges of an influenza patient.

Use of individual table utensils by an influenza patient.

Continuance of quarantine until seven days after the onset of the latest case to develop in the household, or until convalescence has begun in the latest case, or in case of complications until the beginning of convalescence in the complicating disease.

Laundering of bed linen used by the patient and cleansing of his room after convalescence.

Compulsory hospitalization when isolation cannot be secured under home conditions or when quarantine rules are not obeyed.

VIEWS OF THE PRESS ON PUBLIC HEALTH

As to Health Matters

There seems to be considerable interest manifested in the new health law for Ohio, that calls for an entire re-organization of the health board machinery of the state.

From matter sent out from the State Department of Health, it would indicate that under the new organization there will be a much better opportunity to look after the health of the people and enforce the laws of the state in that respect.

More attention will be paid to studying various diseases and looking after the health and welfare of the children of the state.

Not only in Ohio, but all over the nation as well, it has been a comparatively easy matter to go to a legislature and secure an appropriation for the study of disease relating to hogs, cattle, horses and sheep, but when it came to the matter of saving the lives of children, that has been another question, and if an appropriation was made, it was cut down to a point where little could be done in the matter.

But under the Hughes law, revising the health board organization of the state, there seems to be an opportunity to make a study of human conditions to a greater extent, to pay more attention to the child and give it somewhere near the attention that has been so freely given to the calf or the pig.

It is a step well taken and it is reassuring that the state officials in the Department of Health are taking hold of the matter on a broad, progressive basis, that has every indication of spelling success. — *Greenfield Republican*.

Better Health Administration

Hancock County's new health administration machinery under the recently enacted Hughes law is being speedily gotten ready for the opening of the year 1920 when the new order becomes effective through the state. The county board of health has been formed, its organization has been effected and a budget has been formulated for the first year under the new law, outlining the financial program incident to the law's operation.

The budget — calling for \$22,500 — is between three and four times as large as the health administration expense of Hancock County has been on an average in the past, it is understood. But there is reason for the increase. The service that is to be performed is to be more than commensurate with the financial expenditure involved. Instead of a haphazard, loosely controlled system of health administration in the county there is to be efficiently organized work done along public health lines that will more carefully and scientifically conserve and guard the community's health. And for this Hancock County can well afford to pay \$22,500 and more a year.

The *Morning Republican* felicitates the new health board upon its selection of Dr. J. P. Baker as president for its first year. There is no one in city or county more conversant and familiar with the public health problem than is Dr. Baker, who has given it years of study and consideration. Findlay well knows the efficient character of his service for he was for years the head of the city board of health. The new

county board has a leader of recognized ability in Dr. Baker.

As the county board of health proceeds with its work we believe it will have the complete confidence

of the public, which in recent years has become keenly aware of the need for more intelligent public health administration. — *Findlay Republican*.

How to Fight Diphtheria and Scarlet Fever

PARENTS: Call a physician if your child has fever or sore throat. These signs may indicate diphtheria or scarlet fever. In either disease delay in obtaining medical care may endanger the patient's chances of recovery. In the case of diphtheria, recovery is practically certain if antitoxin is administered promptly, but a few days' delay may prove fatal. Remember that a mild case is likely to develop the most serious complications and demands as careful attention as a severe case. In the presence of diphtheria or scarlet fever keep your children out of theaters, street cars and other public places. If one child in the family develops diphtheria, have the physician apply the Schick test to the others to determine whether they are susceptible or immune to the disease, and have him give immunizing treatment to those found susceptible. Follow carefully the instructions of the physician or health officer as to precautions to be observed in caring for the patient.

PHYSICIANS: Make use of the free service of the State health laboratories to diagnose suspected diphtheria cases, submitting specimens whenever there is the slightest indication of the disease. Use antitoxin promptly, without awaiting results of the laboratory examination, and make use of the Schick test and of approved immunizing methods. Report both diphtheria and scarlet fever cases promptly to

the health officer, that he may institute adequate control measures. Insist upon necessary sanitary precautions in the home care of patients. Co-operate with school and health authorities to check the spread of the diseases.

HEALTH OFFICIALS: Enforce quarantine strictly against diphtheria and scarlet fever. Follow up case reports promptly to see that necessary isolation and disinfection are being practiced. Forbid relaxation of a diphtheria quarantine until recovery is established by negative laboratory findings. Arrange for free distribution of diphtheria antitoxin. Educate your community in regard to diphtheria and scarlet fever, enlisting the aid of the newspapers, schools, churches and other educational agencies for this purpose.

SCHOOL OFFICIALS: Institute close medical supervision of school children in the presence of diphtheria or scarlet fever, if this is not already practiced. By daily inspections exclude children showing the slightest indications of illness, and refer such cases to the health officer. This procedure is more satisfactory than closing the schools, which scatters the children so that they can not be kept under supervision and promotes the spread of disease.

Pamphlets on scarlet fever and diphtheria can be obtained free from the State Department of Health.

DISEASES NOTIFIABLE IN OHIO.

Report cases or suspected cases of the following diseases to the health officer having jurisdiction.

NOTIFIABLE INFECTIOUS DISEASES OF COMMON OCCURRENCE.

Chancroid.	Pneumonia, Broncho.
Chickenpox.	Poliomyelitis, acute infectious, (Infantile Paralysis).
Diphtheria and Membranous Croup.	Scarlet Fever.
Gonorrhea.	Smallpox.
Influenza.	Syphilis.
Measles.	Trachoma.
Measles, German.	Tuberculosis, all forms, the organ or part affected to be specified.
Meningitis, Epidemic Cerebrospinal.	Typhoid Fever.
Mumps.	Whooping Cough.
Ophthalmia Neonatorum.	
Pneumonia, Lobar.	

OTHER NOTIFIABLE INFECTIOUS DISEASES.

Actinomycosis.	Leprosy.
Anthrax, human.	Malaria.
Cholera, Asiatic, (cholera nostras when Asiatic cholera is present or threatened).	Paragonimiasis.
Continued fever lasting seven days.	Paratyphoid Fever.
Dengue.	Plague.
Dysentery:	Rabies, human.
a. Amebic.	Rocky Mountain spotted, or tick fever.
b. Bacillary.	Septic sore throat.
Favus.	Tetanus.
Glanders, human.	Trichinosis.
Hookworm Disease.	Typhus Fever.
	Yellow Fever.

OCCUPATIONAL DISEASES AND DISABILITIES.

Anilin Poisoning.	Dinitrobenzine Poisoning.
Arsenic Poisoning.	Lead Poisoning.
Benzine (Gasoline) Poisoning.	Mercury Poisoning.
Benzol Poisoning.	Naphtha Poisoning.
Bisulphide of Carbon Poisoning.	Natural Gas Poisoning.
Brass Poisoning.	Phosphorus Poisoning.
Carbon Monoxide Poisoning.	Turpentine Poisoning.
Compressed-air Illness.	Wood Alcohol Poisoning.

Any other diseases or disability contracted as a result of the nature of the person's employment.

DISEASES OF UNKNOWN ORIGIN.

Cancer.

Pellagra.

Which is more ECONOMICAL for Ohio?

To continue spending more
than \$100,000,000 yearly on
preventable diseases —

OR —

To add \$1,000,000 yearly
to public health expenditures
and thereby make possible
the reduction of this heavy
disease cost.

?

Ask any business man